



UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,543	12/20/2004	Jorg Schottek	LU 6001 (US)	6726
34872	7590	09/26/2007	EXAMINER	
BASELL USA INC.			LEE, RIP A	
INTELLECTUAL PROPERTY				
912 APPLETON ROAD			ART UNIT	
ELKTON, MD 21921			PAPER NUMBER	
			1713	
			MAIL DATE	
			DELIVERY MODE	
			09/26/2007	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/500,543

Applicant(s)

SCHOTTEK ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5 and 9-11 is/are allowed.
- 6) ☒ Claim(s) 1,2,6 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action follows a response filed on June 29, 2007. Claims 1, 3-5, 8-11 were amended, and claim 7 was canceled. Claims 1-6 and 8-11 are pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8 recites a process of utilizing a transition metal dialkyl compound for the racemoselective preparation of silicon-bridged dialkyl *ansa*-metallocenes of the formula (I).

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 2, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winter *et al.* (U.S. 5,145,819) in view of Park *et al.* (*J. Organomet. Chem.*, 1997) for essentially the same reasons set forth in the previous office action.

Park *et al.* does not show the preparation of metallocenes having substituted indenyl groups, *i.e.*, $\text{Me}_2\text{Si}(\text{2-MeInd})_2\text{ZrMe}_2$, the preparation of a series of related metallocenes by this synthetic route shows the general utility of this novel method and suggests that $\text{Me}_2\text{Si}(\text{2-MeInd})_2\text{ZrMe}_2$ may be prepared in similar fashion with a reasonable expectation of success. Therefore, it would have been obvious to one having ordinary skill in the art, upon reading that $\text{Me}_2\text{Si}(\text{2-MeInd})_2\text{ZrMe}_2$, prepared in poor yield by the method in Winter *et al.*, may be prepared more efficiently, would have found it obvious to prepare said complex in greater yield by reaction of $\text{Li}_2[\text{Me}_2\text{Si}(\text{2-MeInd})_2]$ with Me_2ZrCl_2 , and thereby arrive at the subject matter of the

Art Unit: 1713

instant claims. Since this process has been demonstrated to work for a series of similar metallocenes, one having skill in the art would have expected such a modification to work with a reasonable expectation of success. The burden of proof is shifted to Applicant to establish an unobviousness difference regarding chemoselectivity, as per *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Allowable Subject Matter

5. Claims 3-5 and 9-11 are allowed for the same reasons set forth previously.

Response to Arguments

6. Applicant traverses the rejection of claim 8 under 35 U.S.C. 112, 2nd paragraph. Applicant's arguments have considered fully, but they are not persuasive.

While claim 8 does not recite a preamble "The use of a transition metal complex..." typically associated with "use claims," the claim is still drawn to a process without setting forth any steps involved in the process. Such a claim generally raises an issue of indefiniteness, with the most appropriate course of action to be rejecting a "use" claim under alternative grounds based on 35 U.S.C. 101 and 112, as suggested in MPEP § 2173.05(q). Note particularly, that the sentence structure of instant claim 8 is similar to that of claim 6 discussed in *Ex parte Erlich*, 3 USPQ2d 1011 (BPAI, 1986), wherein said claim 6 is drawn to "A process for using (*i.e.*, utilizing) monoclonal antibodies of claim 4 to isolate and purify human fibroblast interferon" and was held indefinite for failing to recite a positive method step.

Furthermore, there are a variety of ways which one of ordinary skill in the metallocene art would immediately envision utilizing metal precursor (III) to achieve the desired goal of making compound (I). Claim 8 alone defines the metal precursor (III) only, however, one of ordinary skill in the art would readily envision use of different ligand precursors (adapted to direct metathesis reaction, alkyl elimination, or silane/stannane elimination reactions, each of which is well-established in metallocene construction) as well as a host of reaction conditions which

Art Unit: 1713

would ultimately afford the claimed compound (I). Therefore, the process claim, without indication of the exact steps taken to arrive at final compound (I), would be indefinite.

Applicant also traverses the rejection of claims under 35 U.S.C. 103(a) as being unpatentable over Winter *et al.* (U.S. 5,145,819, hereinafter "Winter") in view of Park *et al.* (*J. Organomet. Chem.*, 1997, hereinafter "Park").

The first consideration is whether one of skill in the art would have found it obvious to use the synthetic procedure described in Park to improve the yield of synthesis of Winter's $\text{Me}_2\text{Si}(\text{2-MeInd})_2\text{ZrMe}_2$. Given that reaction yield is improved for a variety of metallocenes, it is maintained that one of skill in the art would find it obvious, and would have sufficient motivation, to apply Park's modification in Winter's synthesis of $\text{Me}_2\text{Si}(\text{2-MeInd})_2\text{ZrMe}_2$. The skilled artisan would have expected such a modification to work with a reasonable expectation of success because Park's process is general and would appear to apply to Winter's compounds.

The second consideration is the synthetic outcome. Since the rejection is based on obviousness with a combination of references, clearly, none of the cited art would disclose the *rac*-selectivity of the reaction. Applicant submits that Park *et al.* discloses a mesoselective process, but this is only true for example **4b**, pertaining to synthesis of $\text{Me}_2\text{Si}(\text{Ind})_2\text{ZrMe}_2$. Note that synthesis of other metallocenes (**2a**, **2b**, **3a**, **3b**) are racemoselective. Due to the variation in selectivity, Applicant has no concrete basis to conclude that the combined teaching, proposed in the rejection, is not *rac*-selective. As such, the burden of proof rests with Applicant to establish any unobviousness differences. That is, Applicant may submit evidence to show that modifying Winter's synthesis with Park's methodology would not result in formation of significant quantities of *meso*- $\text{Me}_2\text{Si}(\text{2-MeInd})_2\text{ZrMe}_2$.

In light of this and previous discussion, the rejection has not been withdrawn.

Other considerations. In claims 3 and 9, the minus sign and the numeral have been separated in the recitation of the temperature, "– 30." Please revise this so that they appear on the same line for clarity.

Art Unit: 1713

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

ral

September 20, 2007


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700